

parallel [and are connected to a first terminal (68) of] each switching elements having a resistor and the [an] associated controllable switch [(66)],

[(h)] [the] controllable switch[es (66)] having a first terminal connected to the resistor and a second terminal [(69)] connected to a virtual reference voltage terminal [with a very low voltage swing].

2. (Once Amended) The programmable echo cancellation filter as claimed in claim 1, [wherein] further comprising a control terminal associated with each of the controllable switches, [(66)] of the programmable resistor circuit, [(48, 51, 55)] each have a] the control terminal [(67) which is] being connected via a control line [(19)] to a control circuit [(21)] for setting the resistance of the programmable resistor circuit [(48, 51, 55)].

3. (Once Amended) The programmable echo cancellation filter as claimed in claim 2 wherein the control circuit [(21) is] comprises a DSP processor.

4. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims] claim 1, wherein the controllable switches [(66) are] comprise MOSFET transistors having controllable gate terminals.

5. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims, wherein] claim 1, further comprising a capacitor [(58)] is provided, which is] connected to [a] the low-impedance node [(61) of the echo cancellation filter (14)].

6. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims] claim 1, wherein the controllable switches [(66)] of the first programmable resistor circuit [(48)] are connected to the signal input [(38)] of the operational amplifier [(39) as virtual ground terminal].

7. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims] claim 1, wherein, the controllable switches [(66)] of the second

programmable resistor circuit [(51)] and the controllable switches [(66)] of the third programmable resistor circuit [(55)] are connected to the signal input [(27)] of an operational amplifier [(28)] of an automatic gain control circuit of the transceiver [(1)].

8. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims, wherein the echo cancellation filter (14) is supplied with] claim 1, further comprising a supply voltage terminal for connection to a low supply voltage.

9. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims] claim 1, wherein the echo cancellation filter [(14)] is of fully differential construction.

10. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims] claim 1, wherein the echo cancellation filter [(14) is] comprises a first-order analog low-pass filter.

11. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims] claim 1, wherein the echo cancellation filter [(14) is] comprises a higher order analog low-pass filter.

12. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims] claim 1, wherein the signal input [(13) of the echo cancellation filter (14)] is connected to a signal matching circuit [(11)] for signal matching of the transmission signal.

13. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims] claim 1, wherein the signal output [(15) of the echo cancellation filter (14)] is connected to an automatic gain control circuit in [the] a reception signal path of the transceiver [(1)].

14. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims] claim 1, wherein the resistors contained in the first, second and third programmable resistor circuits [(48, 51, 55)] have weighted resistances.

15. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims] claim 1, wherein[, the] a first gain (H_1)of the echo cancellation filter [(14)] is adjustable in a frequency range lying below [the] a first cut-off frequency (f_U)and [the] a second gain (H_2)of the echo cancellation filter [(14)] is adjustable in a frequency range lying above a second cut-off frequency (f_O), by [the] a control circuit [(21)].

16. (Once Amended) The programmable echo cancellation filter as claimed in [one of the preceding claims] claim 15, wherein the [two] first and second cut-off frequencies (f_U , f_O)of the echo cancellation filter [(14)] are adjustable by the control circuit [(21)].

17. (Once Amended) A transceiver for xDSL signals, [which contains] the transceiver comprising a programmable echo cancellation filter [(14).] as [claimed] recited in claim 1.

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